Amendments to the Specification:

Please replace the paragraph beginning at page 1, line 6, with the following amended paragraph:

-- This application is a divisional of U.S. Application No. 09/451,489, filed November 30, 1999 and issued as U.S. Patent No. 6,761,876, which claims of the benefit of U.S. Provisional Application No. 60/110,464, filed December 1, 1998. Commonly owned U.S. Provisional Application No. 60/100,950 filed September 18, 1998, and U.S. Application No. 60/075,783, filed February 22, 1998, are directed to related subject matter. Each of the above applications are incorporated by reference in its entirety for all purposes. --

Please replace the paragraph beginning at page 2, line 25, with the following amended paragraph:

-- The invention provides methods of cellular analysis using fish. Such methods entail introducing one or more heterologous cells into a fish, and analyzing a property of the cells or the fish. The methods are particularly suited for introduction of heterologous cells into fish embryos, particularly zebrafish embryos. Introduced cells remain viable at least until the analyzing step is performed. Some cell types undergo proliferation in the recipient fish. In some methods, the fish is contacted with an agent, and the analyzing determines whether the property is responsive to administration of the agent. Properties of heterologous cells or fish that can be analyzed include differentiation markers, [[r,]] survival of the fish, proliferation of the heterologous cells, movement of the heterologous cells relative to an initial site of introduction, death of heterologous cells or cells of the fish, or proliferation of heterologous cells. In some methods, the heterologous cells are cancer cells. In some methods, the heterologous cells are stem cells. In some methods, the heterologous cells are differentiated cells. In some methods, the heterologous cells are human cells. In some methods, the heterologous cells are bacterial or fungal cells. In some methods, the cells are virally infected cells. Some methods further comprising recovering heterologous cells from recipient fish. --

Please replace the paragraph beginning at page 23, line 9, with the following amended paragraph:

-- 9. [[BRU]] BRDU Labelling

5-bromo-2'- deoxyuridine (BrdU) is a mitotic S-phase marker. To assay for proliferation, a 3 μM solution of BrdU (Sigma) was injected into 24 hour xenograft zebrafish embryos in which cells had previously been transplanted. Embryos were incubated for 24 hours to permit incorporation of BrdU into the DNA of the transplanted cells and the host cells. Embryos were then collected, fixed with 4% PFA at room temperature, and dehydrated to 100% methanol. --